



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-HQ-ES-2012-0094]

[FXES111309F2130-123-FF09E22000]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to Delist the Wood Bison

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to delist the wood bison (*Bison bison athabasca*) under the Endangered Species Act of 1973, as amended (Act). Based on our review, we find that the petition does not present substantial information indicating that delisting the wood bison subspecies may be warranted. Therefore, we are not initiating a status review in

response to this petition. However, we ask the public to submit to us any new information that becomes available concerning the status of, or threats to, the wood bison or its habitat at any time.

DATES: The finding announced in this document was made on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: This finding is available on the Internet at <http://www.regulations.gov> at Docket Number FWS-HQ-ES-2012-0094. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Alaska Regional Office, 1011 East Tudor Road, Anchorage, AK 99503; (907) 786-3856. Please submit any new information, materials, comments, or questions concerning this finding to the above street address.

FOR FURTHER INFORMATION CONTACT: Marilyn Myers at U.S. Fish and Wildlife Service, Fisheries and Ecological Services, 1011 E. Tudor Road, Anchorage, AK 99503; or by telephone at 907-786-3559; or by facsimile at (907) 786-3848. If you use a telecommunications device for the deaf (TDD), please call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq.*) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition, and publish our notice of the finding promptly in the **Federal Register**.

Our standard for substantial scientific or commercial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” (50 CFR 424.14(b)). If we find that substantial scientific or commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

Petition History

On April 3, 2012, we received a petition, dated April 3, 2012, from the Western

Bison Association, the Rocky Mountain Buffalo Association, the Minnesota Buffalo Association, the Oklahoma Buffalo Association, the North Dakota Buffalo Association, the Northwest Buffalo Association, the Missouri Buffalo Association, the Kansas Buffalo Association, and W. Michael Gear and Kathleen O'Neal Gear requesting that the wood bison be removed from the Federal List of Endangered and Threatened Wildlife as threatened under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioners, as required at 50 CFR 424.14(a). In a letter to the petitioners sent April 24, 2012, we stated that we anticipated that we would review the petition and make a finding within the coming year. This finding addresses the petition.

Previous Federal Action(s)

The listing history for wood bison is extensive and was reconstructed in the proposed rule to reclassify wood bison from endangered to threatened, which published February 8, 2011 (76 FR 6734). Please refer to that document for the complete listing history. Here we present only the most pertinent facts.

Wood bison became listed in the United States under the 1969 Endangered Species Conservation Act when it was included on the first List of Endangered Foreign Fish and Wildlife, which was published in the **Federal Register** on June 2, 1970 (35 FR 8491). In 1974, the first list under the 1973 Endangered Species Act appeared in the Code of Federal Regulations (CFR); the wood bison was listed as an endangered species

based on its inclusion on the original 1969 list. Because the wood bison was listed under the 1969 Endangered Species Conservation Act, there is not a separate **Federal Register** notice that defined the population(s) and their range, or analyzed threats to the subspecies.

On May 14, 1998, the Service received a petition from a private individual requesting that the Service remove the wood bison from the List of Endangered and Threatened Wildlife, primarily because it had been downlisted from Appendix I to Appendix II under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In a 90-day finding published on November 25, 1998 (63 FR 65164), we found that the petitioner did not provide substantial information to indicate that the delisting may be warranted.

On November 26, 2007, we received a petition from the co-chairs of Canada's National Wood Bison Recovery Team requesting that we reclassify the wood bison from endangered to threatened. On February 3, 2009, we published a 90-day finding (74 FR 5908) acknowledging that the petition provided sufficient information to indicate that reclassification may be warranted and that we would initiate a status review. On February 8, 2011, we published a proposed rule to reclassify wood bison (76 FR 6734), and on May 3, 2012, we published a final rule reclassifying wood bison as threatened under the Act (77 FR 26191).

Status in Canada

In Canada, the Species at Risk Act (SARA) is the Canadian counterpart to the U.S. Endangered Species Act. Under the SARA, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was established as the scientific body that identifies and assesses a species' status. The wood bison was recognized by the COSEWIC as an endangered subspecies of Canadian wildlife in 1978. Wood bison was reclassified to threatened in June 1988, based on a status report prepared by the National Wood Bison Recovery Team. The National Wood Bison Recovery Team published a national recovery plan in 2001 (Gates *et al.* 2001), which has guided recovery actions in Canada since that time.

Species Information

Wood bison is the largest native extant terrestrial mammal in North America (Reynolds *et al.* 2003, p. 1015). Average weight of mature males (age 8) is 910 kilograms (kg) (2,006 pounds (lb)) and the average weight of mature females (age 13) is 440 kg (970 lb) (Reynolds *et al.* 2003, p. 1015). They have a large triangular head, a thin beard and rudimentary throat mane, and a poorly demarcated cape (Boyd *et al.* 2010, p. 16). In addition, the highest point of their hump is forward of their front legs; they have reduced chaps on their front legs; and their horns usually extend above the hair on their head (Boyd *et al.* 2010, p. 16). These physical characteristics distinguish them from the plains bison (Reynolds *et al.* 2003, p. 1015; Boyd *et al.* 2010, p. 16). Detailed information on the biology of wood bison is provided in our February 8, 2011, proposed

rule to reclassify wood bison as threatened (76 FR 6734) and in our May 3, 2012, final rule (77 FR 26191). Please refer to those documents for a detailed account of the species' biology.

Taxonomy

In the proposed and final rules (76 FR 6734, 77 FR 26191), we adopt the widely accepted notion that wood bison is a valid subspecies, a point which the petitioners contest. The petitioners assert that wood bison and plains bison (*Bison bison bison*) are not significantly different and that they should be considered a single species. Therefore, we discuss taxonomic classification and our rationale for accepting wood bison as a valid subspecies below.

Taxonomy is the theory and practice of classifying organisms. Traditionally, physical characteristics of an organism were used to describe a species. However, from an evolutionary perspective, appearances can be deceptive; animals that look alike may not be closely related and animals that appear different from one another may actually be closely related. With the advent of sophisticated molecular tools, taxonomists can now examine various aspects of a species genetic code to help them determine how closely animals are related to one another. Although molecular techniques have added another tool in the taxonomist's toolbox, they also have limitations and do not necessarily give an unambiguous picture of the relationship among species. Sample size (number of animals sampled, number of genes sampled, or the number of loci on a gene sampled), type of

DNA examined (mitochondrial DNA vs. nuclear DNA), the techniques used, and the populations selected for sampling are among a few of the reasons that variable or ambiguous results may arise. In addition, how a species (or subspecies) is defined, which on its face is a simple concept, is in reality very complex, and several definitions for “species” exist (Mayr and Ashlock 1991, pp. 24–28; de Queiroz 2007, pp. 879–885). Consequently, the intersection of incomplete knowledge of exactly how animals are related to one another, combined with the human concept of what a species is, often culminates in controversy over whether certain groups of animals should be lumped together or split apart. Such is the case for wood bison.

We recognize, as the petitioners assert, that differences in opinion exist regarding the division of *Bison* into two subspecies (*B. b. athabascae* and *B. b. bison*) (e.g., Bork *et al.* 1991, pp. 43, 47; Geist 1991, p. 283). However, quantified differences in pelage (e.g., distribution of mane, chaps, and cape) and structure (e.g., overall body size, location of hump, length of horns) have been described (van Zyll de Jong *et al.* 1995, pp. 394–400). These differences, and the fact that wood bison and plains bison are physically separated by a great distance, led Boyd *et al.* (2010, p. 16 (American Bison Specialist Group)) to conclude separation into two subspecies is consistent with the subspecies concept. As noted in our final rule to downlist wood bison (77 FR 26209), the introduction of plains bison into Wood Buffalo National Park in Canada, the only place where wood bison remained in the 1920s, led to some degree of hybridization. However, genetic analysis has indicated that although the wood bison had limited contact with plains bison, it was minimal enough that the animals exhibit predominantly wood bison traits. Wood bison

originating from founders with minimal contact with plains bison are genetically more similar to one another than they are to plains bison (van Zyll de Jong *et al.* 1995, pp. 394–404; Wilson and Strobeck 1999, p. 493). Hybridization did not lead to a phenotypically homogenous population (one population that looks the same) (van Zyll de Jong *et al.* 1995, pp. 394–404).

As described above, molecular tools can be used to evaluate the relatedness of individuals, populations, species, and genera. The work of Wilson (2001) and Wilson and Strobeck (1999, pp. 493–494) using DNA microsatellites indicate that the genetic differences between plains bison and wood bison are greater than those within either of the two subspecies. These results support maintaining the subspecific designation. Results of studies that sequence only mitochondrial DNA are of limited value in answering questions about subspecific designation because mitochondrial DNA is inherited only from the maternal side (Avice 1994, pp. 62, 99). In the case of Douglas *et al.* (2011), which the petitioners use as support for their argument of lumping the subspecies together, mitochondrial DNA from only two wood bison were sequenced, further limiting the authors' ability to draw general conclusions about the relatedness of wood and plains bison. As Boyd *et al.* (2010, p. 17) note, the inability to detect a difference with a molecular test comparing limited sequences of genomic material does not necessarily mean that there is no difference. It is possible that in the future refined genetic analysis with appropriate sample design and sample size will provide a more compelling reason to lump the two subspecies together. Until that time, we will continue to follow the accepted separation of North American bison into two subspecies.

The Canadian National Recovery Plan (Gates *et al.* 2001, p. 28) provides this summary about American bison subspecies:

(1) Historically, wood bison differed from other bison populations with regard to multiple morphological and genetic characteristics.

(2) The intrusion of plains bison into the range of wood bison in 1925–1928 was entirely human-caused.

(3) The two North American bison subspecies continue to be morphologically and genetically distinct, despite some hybridization in the 1920s.

(4) Wood bison and their descendants continue to constitute populations of a subspecies of bison.

In a recent evaluation of the subspecific separation of wood bison from plains bison, Boyd *et al.* (2010 pp. 15–18) also conclude that there appears to be sufficient justification for the formal recognition of the two subspecies. In addition, they point out that regardless of the formal designation for wood bison, all forms of geographic and ecological variation contribute to biodiversity and that variants of a species may have evolutionarily important ecological adaptations (Boyd *et al.* 2010, p. 18). This reality is reflected in the Service’s ability to recognize and provide protection to “distinct population segments” at a taxonomic level below subspecies. In addition, COSEWIC also considers and includes subspecies, varieties, or geographically or genetically distinct populations in its definition of wildlife species (http://www.cosewic.gc.ca/eng/sct2/sct2_5_e.cfm, viewed June 26, 2012). Both the Act

and SARA recognize that conservation of biological diversity requires protection for taxonomic entities below the species level whether at the subspecific level or less (e.g., distinct populations). Therefore, regardless of how we name the populations we now call wood bison, since its description in 1897 (Rhoads 1897) wood bison in Canada have been recognized as a unique subspecies and managed as such. Consequently, even if we were to consider wood bison and plains bison as one species, that would not automatically lead to the delisting of the wood bison.

The International Code of Zoological Nomenclature (Code) provides guidance to zoologists worldwide regarding naming species. In the Preface to the Code it states, “Nomenclatural rules are tools that are designed to provide the maximum stability compatible with taxonomic freedom.” A published “revision” or “monograph” is the standard method used to examine all the species within a group and present a unified synopsis of all of the information available (Mayr and Ashlock 1991, p. 348).

Recognizing the taxonomic controversy that exists for the subspecific designation of wood bison, a reasonable, defensible, and conservative approach is to follow the naming conventions that are in place. The petition does not provide compelling, convincing, or unambiguous information that would cause the Service to consider wood bison and plains bison as a single species, nor can we authoritatively resolve this issue with the information available.

In summary, based on the historical physical separation, and quantifiable behavioral, morphological, phenological (appearance), and genetic differences between

the two subspecies, the best available scientific information indicates that subspecific designation is appropriate (FEAP 1990, p. 24; Bork *et al.* 1991, p. 47; van Zyll de Jong *et al.* 1995, pp. 403–404; Wilson and Strobeck 1999, pp. 492–494; Reynolds *et al.* 2003, p. 1010; Boyd *et al.* 2010, pp. 15–18). The established management of bison as two subspecies and the long-standing recognition of the two subspecies by the scientific community provide additional justification for treating wood bison and plains bison as two distinct subspecies.

Evaluation of Information for This Finding

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR 424 set forth the procedures for adding a species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

We must consider these same five factors in delisting a species. We may delist a species according to 50 CFR 424.11(d) if the best available scientific and commercial data indicate that the species is neither endangered nor threatened for the following reasons:

- (1) The species is extinct;
- (2) The species has recovered and is no longer endangered or threatened; or
- (3) The original scientific data used at the time the species was classified were in error.

In the case of this petition, the petitioners have not discussed threats to the species (or subspecies) that remain or have been eliminated. They focus instead on the success of recovery efforts for wood bison “ecotype,” the increase in the number of animals, and the establishment of new herds. We agree that significant strides have been made towards recovery of wood bison, and we discussed the success of recovery efforts in our proposed and final rules for the reclassification of wood bison (76 FR 6734, 77 FR 26191).

Although we acknowledge that wood bison are no longer endangered, we conclude in our final rule that threats to wood bison remain and that the wood bison should be listed as threatened. In particular, we identified loss of habitat, disease, and hybridization as ongoing threats. The conclusions made in the May 3, 2012, final rule to reclassify the subspecies are still valid. The petitioners have not provided, and we have not received, any new information regarding threats to, or recovery of, wood bison that was not considered in the final reclassification rule.

Finding

The petition does not present substantial information to indicate that delisting of wood bison is warranted. Although we recognize that controversy exists around the subspecific designation for wood bison, nomenclature stability, management history, and the acceptance of two subspecies by the American Bison Specialist Group, the Canadian National Wood Bison Recovery Team, and other zoologists lead us to the conclusion that retaining the current nomenclature is appropriate and defensible.

Although the petitioners argue that wood bison and plains bison should be considered as one species, they did not indicate that all or most threats to bison have been ameliorated. Instead, they focus on the success of recovery efforts for wood bison. We agree that the status of wood bison is more secure today than it once was. However, in our final rule to reclassify wood bison as threatened, which published earlier this year, we identified threats that remain to the species. The petitioners did not provide any new information about the status of the species that we were not already aware of and had evaluated in our final rule.

On the basis of our determination under section 4(b)(3)(A) of the Act, we conclude that the petition does not present substantial scientific or commercial information to indicate that delisting the wood bison under the Act may be warranted at this time. Although we will not conduct a thorough review of the status of the species at this time, we encourage interested parties to continue to gather data that will assist with

the conservation of the wood bison. If you wish to provide information regarding the wood bison, you may submit your information or materials to Marilyn Myers, Endangered Species Biologist, Alaska Regional Office (see **FOR FURTHER INFORMATION CONTACT**), at any time.

References Cited

A complete list of references cited is available on the Internet at *<http://www.regulations.gov>* and upon request from the Alaska Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

Author

The primary author of this notice is Marilyn Myers of the Alaska Regional Office (see FOR FURTHER INFORMATION CONTACT).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: November 7, 2012

Daniel M. Ashe

Director, U.S. Fish and Wildlife Service

Billing Code 4310-55-P

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